DOCUMENT RESUME

ED 090 397 CE 001 256

AUTHOR	Beasley, Gary F.; And Others
TITLE	Glossary of Terms: Forest Products Mill.
INSTITUTION	Mississippi Research Coordinating Unit for Vocational-Technical Education, State College.
SPONS AGENCY	Mississippi State Dept. of Education, Jackson. Div. of Vocational and Technical Education.
PUB DATE	73
NOTE	23p.
EDRS PRICE	MF-$0.75 HC-$1.50 PLUS POSTAGE
DESCRIPTORS	*Forestry; *Glossaries; *Lumber Industry; Trees; *Woodworking

ABSTRACT

This set of standardized terms from the forest products industry was compiled for the persons in the Weyerhaeuser Company's forest products plant. It is composed of common terms used in the selection, processing, wood working, and finishing of forest products, but does not claim to be an exhaustive list. (DS)

GLOSSARY OF TERMS:

FOREST PRODUCTS MILL

ED 090 347

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Published by

Mississippi State University
Research and Curriculum Unit for
Vocational and Technical Education
Mississippi State, Mississippi

In Cooperation With

Mississippi State Department of Education
Division of Vocational and Technical Education
Jackson, Mississippi

CE 001 256

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1973

FOREWORD

This glossary was compiled to provide persons in the Weyerhaeuser Company's forest products plant at Bruce, Mississippi, with a set of standard terms to be used day to day. No attempt has been made to provide an exhaustive listing of terms used in various forest products industries. The sources from which these terms were taken are many. Special acknowledgment is made to **Forest Terminology**, a publication of the Society of American Foresters, from which a great portion of the terms were obtained.

Arbor. A shaft which runs in bearings mounted on hangers.

ASI. An automatic log scaler. ASI stands for Atmospheric Sciences, Incorporated.

Back. Portion of tooth behind the face not responsible for cutting.

Banding. Tying the stack of lumber into bundles by clamping metal bands together.

Band Saw. A continuous revolving band of steel with saw teeth on one or both sides.

Barker. See debarker.

Bark, Inner. The active layer of tissues between the cambium and the last-formed periderm.

Bark, Outer. The layer of dead tissue, of a dry corky nature, outside the last-formed periderm.

Battery Edger. Edger with several saws fixed on an arbor at a set distance or spacing.

B. F. Abbreviation for "board feet."

Bit. Another cutting tool which is used in certain planers.

Blaze. A mark placed on a standing tree to call special attention to the tree.

Blower. Fan used to blow the fuel down the blow pipe.

Blow Pipe. Pipe used to transfer the hog fuel from the hog to the boiler. Also used to transfer chips to rail cars.

Blue Stain. Discoloration of logs in dry storage.

B. M. Abbreviation for "board measure," meaning board feet.

Board Foot. A unit of measure represented by a board 1 foot long, 1 foot wide, and 1 inch thick.

Bolt. Any short log, as a pulpwood or veneer bolt.

Bottom Head. Cutting head used on a planer that cuts on the bottom of the board and ahead of the side head.

Bow. Longitudinal curvature, flatwise from a straight line drawn from end to end of the piece of lumber.

Bridge Table. Place where dried, unfinished lumber is brought, to be properly fed into the planer.

Buck. Refers to the removal of limbs and cutting the tree into proper lengths, suitable for mill utilization.

Bunk. 4 x 4's placed over stickers to separate the different stacks.

Bush. Manufacturing company dealing in the forest products industry.

Bush Crane. Stationary 100' vircular boom, designed for unloading log trucks.

Butt Cut. The first log above the stump. Syn. "Butt log."

Cant. A log which has been debarked, trimmed of slabs and is ready for sawing.

Carbide. Very hard material with which saw teeth are tipped.

Car Line. An area where rail cars are loaded.

Catface. A scar on the surface of a log, generally elliptical in shape, resulting from wounds which have not healed over; also a fire scar at the base of a tree.

Cat 966. Mobile log stacker, straightliner, and unloader.

Check. A separation of the wood normally occurring across or through the rings of annual growth and usually as a result of seasoning. (a) A surface check occurs only on one surface of a piece. (b) A through check extends from one surface of a piece to the opposite or adjoining surface. (c) Small checks are not over 1/32" wide and not over 4" long. (d) Medium checks are not over 1/32" wide and not over 10" long. (e) Large checks are larger than medium. (f) A roller check is a crack in the wood structure caused by a piece of cupped lumber being flattened in passing between the machine rollers. A light roller check is a perceptible opening not over 2' long. A medium roller check is a perceptible opening over 2' long but not exceeding 4' in length. A heavy roller check is over 4' in length.

Cherry Brown. Color of lumber after the wood preservative is added.

Chipper. Machine used to reduce clabs and edgings to small chips for use in the making of press board, particleboard manufacturing and paper.

Chips. Hogged wood ready for cooking into pulp. In turpentining, particles of wood or bark fallen into the cups.

Class, Diameter. One of the intervals into which the range of diameters of trees in a forest is divided for purposes of classification and use.

Clean-boled. Free or cleared of branches; used to designate timber with a satisfactory length of clear bole.

Clearcutting. An area on which the entire timber stand has been cut.

Coarse Grain. Lumber which fails to meet medium-grain requirements, and this classification may be used for lumber produced from any Southern Pine.

Combination Edger. This type edger is both a battery edger and a shifting edger.

Commercial Forest. Forest land that is producing or is capable of producing crops of industrial wood and not withdrawn from timber utilization.

Compression Wood. Abnormal wood that forms on the underside of leaning and crooked coniferous trees. It is characterized, aside from its distinguishing color, by being hard and brittle and by its relatively lifeless appearance. It is not permitted in readily identifiable and damaging form in stress grades, nor where specifically limited.

Conveyor. A continouous belt, a continuous chain, or a number of individual rollers, adapted to situations where material flows in a production line over the same route in a substantial volume.

Cord. A volume measure of stacked wood. A standard cord is 4 x 4 x 8 feet, or 128 cubic feet of space. A long cord (unit) contains 160 cubic feet of space and is 4 x 5 x 8 feet. Since round wood cannot be stacked to give solid volume, actual wood volume varies between 70 and 90 cubic feet per cord.

Core, Increment. That part of the cross-section of a tree extracted by an increment borer. Used to determine age and data on growth.

Conifer. A tree belonging to the order Coniferae, usually evergreen, with cones and needle-shaped leaves, and producing wood known commercially as "softwood."

Cooling Shed. Shed where the dried lumber is properly cooled.

Crook. A defect in logs and poles or piling, consisting of an abrupt bend.

Crosscut. To cut a board, timber, or log at right angles to the general direction of the fibers. Syn. Buck.

CRT Kiln. The constantly rising temperature kiln is a patented drying system which starts at low dry bulb temperature and raises the temperature at a constant rate.

Cubic Foot. A cube 12" on a side. A cubic foot of wood is considered to contain 6 to 10 board feet.

Cull. A tree or log of merchantable size rendered unmerchantable because of poor form, limbyness, rot, or other defect.

Cunit. One hundred (100) solid cubic feet.

Cup. Curving of the face of a plank so that it assumes a troughlike shape, the edges remaining parallel to each other.

Cut-off Saw. Reduces logs to desired length for proper mill utilization.

Debarker. Manufacturing machine designed to remove the bark from the logs.

Decay. A disintegration of the wood substance due to action of wood-destroying fungi, and is also known as dote, rot and unsound wood. (a) Heart center decay is a localized decay developing along the pith in some species and is readily identifiable and easily detected by visual inspection. Heart center decay develops in the living tree and does not progress further after the tree is cut. (b) White specks are small white pits or spots in wood caused by the fungus "Fomes pini." It develops in the living tree and does not develop further in wood in service. Where permitted in these rules it is so limited that it has no more effect on the intended use of the pieces than other characteristics permitted in the same grade. Pieces containing white speck are no more subject to decay than pieces which do not contain it. (c) Honeycomb is similar to white speck but the pockets are larger. Where permitted in the rules it is so limited that it has no more effect on the intended use of the piece than other characteristics permitted in the same grade. Pieces containing honeycomb are no more subject to decay than pieces which do not contain it. (d) Peck is channeled or pitted areas or pockets as sometimes found in cedar and cypress. Wood tissue between pecky areas remains unaffected in appearance and strength. All further growth of the fungus causing peckiness ceases after the trees are felled.

Deciduous. Term applied to trees which drop their leaves in the fall.

Decimal Scale. A log scale graduated and marked in tenths of board feet.

Deck, Log. The platform in a sawmill upon which logs are held previous to sawing. Syn. Mill deck.

Defect. Any irregularity or imperfection in a tree, log, piece, product, or in lumber that reduces the volume of sound wood or lowers its durability, strength, or utility value.

Dense Grain. Method of grading lumber in which the lumber shall average on one end or the other of each piece not less than 6 annual rings per inch and 1/3 or more summerwood.

Diameter Breast High. The diameter of a tree at 4.5 feet above average ground level; in National Forest practice it is measured from the highest ground level. Abbreviated "d. b. h." The abbreviations, "d. o. b." and "d. i. b." are used to designate diameter measured outside and inside the bark, respectively, usually at the small end of the log.

Dote. An early stage of decay usually characterized by a change in color of the wood in patches or streaks which may be lighter or darker than normal. See Rot.

Down Time. Length of time a plant or parts of the plant are not operational due to mechanical malfunctions.

Doyle Log Scale. A method of determining merchantable content of timber. It is derived from the following formula:

$$\text{volume} = \frac{(\text{Diameter at small end} - 4)^2}{4} \times \text{length of log}$$

Drop Sorter. A computerized machine designed to "sort" the green lumber according to its length, width and thickness.

Dunnage. Heavy objects placed on stacks to minimize warp. Also material used to space and secure loads during shipment.

Edge. There are three meanings for edge: (1) The narrow face of rectangular-shaped pieces. (2) The corner of a piece at the intersection of two longitudinal faces. (3) Usually in stress grades that part of the wide face nearest the corner of the piece. (a) Eased edges means slightly rounded surfacing on pieces of lumber to remove sharp corners. Lumber 4" or less in thickness is frequently shipped with eased edges unless otherwise specified. Lumber of 1" and 2" thickness may be rounded to a radius of no more than 1/16" and 1/8" respectively. (b) Square edged means free from wane and without eased edges. (c) Free of wane means without wane but may have eased edges. (See Wane) (d) Square corners means without eased edges but may permit wane allowance.

Edge Printer. Prints on the edge of the lumber the trademark of company.

Edger. Saw which cuts boards into desirable widths.

Edger Saw. That part of the edger that cuts the timber to the proper specifications.

Face. The surface of the saw tooth exposed to cut (see Back).

Filer. Keeps saws sharp by filing them.

Forestation. The establishment of forest naturally or artificially upon areas where it is or has been absent or insufficient.

Forklift. Implement used to lift objects. The forklift consists of two arms mounted on a movable lift.

Forktruck. Mobile equipment containing a forklift.

Gauge. The thickness of the saw blades.

Grade. To assort lumber of logs and classify according to quality. Syn. Cull.

Grader. Person who grades lumber.

Grain. The fibers in wood and their direction, size, arrangement, appearance or quality. (a) Slope of grain is the deviation of the line of fibers from a straight line parallel to the

sides of the piece. (b) Summerwood is the portion of the annual growth ring formed during the latter part of the yearly growth period. It is darker in color, more dense, and stronger mechanically than springwood. (c) Springwood is the portion of the annual growth ring formed during the early part of the yearly growth period. It is lighter in color, less dense, and not as strong mechanically as summerwood. (d) Vertical grain (VG) (Edge grain EG) (Rift grain) lumber is a piece or pieces sawn at approximately right angles to the annual growth rings so that the rings form an angle of 45 degrees or more with the surface of the piece. (e) Flat grain (FG) (Slash grain SG) lumber is a piece or pieces sawn approximately parallel to the annual growth rings so that all or some of the rings form an angle of less than 45 degrees with the surface of the piece. (f) Mixed grain (MG) lumber may be either or both vertical and flat grain. (g) Spiral grain is a deviation in the slope of grain caused when the fibers in a tree take a spiral course around the trunk of the tree instead of the normal vertical course. (h) Diagonal grain is a deviation in the slope of grain caused by sawing at an angle with the bark of the tree.

Grapple. A pair of hydraulic arms used to pick up logs.

Grinder. Responsible for sharpening teeth on the saws.

Gullet. Area between two teeth.

Hardwood. Generally, one of the botanical group of trees that has broad leaves, in contrast to the needle-bearing conifers; also, wood produced by broad-leaved trees regardless of texture or density.

Heart. The portion of the tree contained within the sapwood. It is sometimes used to mean the pith. (a) Boxed heart means with the pith enclosed in the piece. (b) Heart center is the pith or center core of the log. (c) Free of heart center (FOHC) means without pith (side cut). When a piece has been sawn so as to eliminate the pith (heart center), an occasional piece showing pith on the surface for not more than 1/4 the length may be accepted. (d) Heartwood and sapwood of equivalent character are of equal strength. No requirement of heartwood need be made when strength alone is the governing factor. (e) Heartwood is more durable than sapwood, and for wood which is to be exposed to decay-producing conditions without preservative treatment, the minimum percentage of heartwood to be present in all pieces in a shipment of any species may be specified. (f) Sapwood takes preservative treatment more readily than heartwood, and is equally durable when treated. For lumber and timbers to be treated, there should be no heartwood requirement nor limitation on sapwood.

Height, Merchantable. The length of the tree stem from the top of the stump to the top end of the last merchantable section. Usually expressed in feet or number of logs or bolts of some standard length.

High-grading. The removal from the stand of only the best trees.

Hog. A device used to reduce waste pieces of lumber and slabs or small stems to chip form.

Hog Fuel. Small chips from waste material used to fire the boilers.

Holes. Holes may extend partially or entirely through a piece and may be from any cause. Holes that extend only partially through the piece may also be designated as surface pits. Unless otherwise specified holes are measured the same as knots. Holes are classified as follows: (a) A pin hole is not over 1/16" in diameter. (b) A medium (small) hole is not over 1/4" in diameter. (c) A large hole is not over 1" in diameter. (d) A very large hole is over 1" in diameter.

Hook. The angle between the point of the saw and the face.

Hour Glass Rolls. Rotating conveyor system, consisting of individual rollers shaped like an hour glass.

Hyster. Manufacturing company making timber and wood products machinery, primarily forklifts.

Infeed. Material conveyor which is bringing material into a machine.

Inspector. Representative of the SPIB, who tests lumber graders to assure they are meeting SPIB standards.

Inventory. Amount of merchandise available for sale.

Irvington-Moore. Manufacturing company that makes machinery used in the forest products industry.

J-Bars. Carrying arms on a chain conveyor designed to drop lumber in the proper sorter tray.

Kerf, Saw. The width of cut made by a saw.

Kiln, Dry. A structure heated by gas or electricity, in which lumber is seasoned artificially or pine cones are dried and opened.

Kiln-dry (or kiln-dried). A term applied to wood dried in a kiln.

Knots. A portion of a branch or limb that has become incorporated in a piece of lumber. In lumber, knots are classified as to form, size, quality and occurrence. A red knot is one that results from a live branch growth in the tree and is intergrown with the surrounding wood. A black knot is one that results from a dead branch which the wood growth of the tree has surrounded. (a) A round knot is a knot cut at right angles to the length of the knot (limb). (b) An oval knot is a knot cut at slightly more than right angles to the length of the knot (limb). (c) A spike knot is a knot cut either lengthwise of the knot or diagonally across it. (d) A pin knot is not over 1/2". (e) A small knot is not over 3/4". (f) A medium knot is not over 1 – 1/2". (g) A large knot is over 1 – 1/2". (h) A sound knot contains no decay. It may be red or black. (i) A pith knot is sound in all respects except it contains a pith hole not over 1/4" in diameter. (j) A hollow knot is an apparently sound knot in all respects except it contains a hole over 1/4" in diameter, and a through opening in a hollow knot may be of a size equal to other holes permitted. (k) An unsound knot contains decay.

(l) A "firm" knot is solid across its face but contains no incipient decay. (m) A tight knot is so fixed by growth, shape or position that it retains its place in the piece. It may be red or black. (n) An intergrown knot is one whose growth rings are partially or completely intergrown on one or more faces with the growth rings of the surrounding wood. (o) A watertight knot has its growth rings completely intergrown with those of the surrounding wood on one surface and is sound on that surface. (p) An encased knot is one which is not intergrown with the growth rings of the surrounding wood. (q) A "loose" or "not firmly fixed" knot is one not held tightly in place by growth, shape or position. (r) A "fixed" knot will retain its place in dry lumber under ordinary conditions but can be moved under pressure though not easily pushed out. (s) A knot cluster is two or more knots grouped together as a unit with the fibers of the wood deflected around the entire unit. (t) A star-checked knot has radial checks. (u) Well-scattered knots are not in clusters and each knot is separated from any other by a distance at least equal to the diameter of the smaller of the two. (v) Well-spaced knots means that the sum of the sizes of all knots in any 6" of length of a piece must not exceed twice the size of the largest knot permitted. More than one knot of maximum permissible size must not be in the same 6" of length and the combination of knots must not be serious. The average of maximum and minimum diameters determines the size of a knot unless otherwise specified.

Kiln Stick. Stick laid between the layers of a stack to facilitate proper drying of the lumber in the stack.

Length, Clear. The portion of the stem of a tree from limbs, from the ground to the lowest branch or branch stub.

Letson and Burpee. Manufacturing company in the forest products industry that built the 5' quad saw.

Limit, Diameter. The smallest, and occasionally the largest, size to which trees or logs are to be measured, cut, or used. The points to which the limit usually refers are stump, breast height, or top.

Line Bar. An actual mechanical bar that guides lumber through a machine.

Lineal Counter. A counter that measures and records the number of lineal feet of a product that has passed the counter.

Log. To cut and deliver logs; tree segment suitable for lumber and other products; tree segment 8 to 16 feet in length.

Log Deck. Storage space for logs.

Log Rule. A table showing the estimated or calculated amount of lumber which can be sawed from logs of given length and diameter.

Log Scale. A graduated stick for measuring the diameters and contents of logs; both measures are stamped on the stick.

Logger. A man who is engaged in a logging operation; locally, a man who hauls logs to landings or skidways.

Lop. To chop branches, tops, or small trees after felling, so that the slash will lie close to the ground; to cut the limbs from a felled tree.

Lumber, Green. Lumber with the moisture content greater than that of air-dried lumber. Unseasoned lumber.

Lumber line. That line on a lumber transfer where the end of a piece of lumber indexes regardless of its length.

Lug. A piece of metal, rising from a rotating chain that picks up the lumber from the unscrambler.

Lugs/Minute. The number of lugs which pass through the unscrambler in a minute (60 seconds).

Matcher. Is another term used to refer to planing.

Manufacturing Imperfections. Means all imperfections or blemishes which are the result of manufacturing, such as the following: (a) Chipped grain is a barely perceptible irregularity in the surface of a piece caused when particles of wood are chipped or broken below the line of cut. It is too small to be classed as torn grain and as usually found is not considered unless in excess of 25% of the surface involved. (b) Torn grain is an irregularity in the surface of a piece where wood has been torn or broken out by surfacing. Torn grain is described as follows:

Very light torn grain – not over 1/64" deep.
Light torn grain – not over 1/32" deep.
Medium torn grain – not over 1/16" deep.
Heavy torn grain – not over 1/8" deep.
Very heavy torn grain – over 1/8" deep.

(c) Raised grain is an unevenness between springwood and summerwood on the surface of dressed lumber. Slight raised grain is an unevenness somewhat less than 1/64". Very light raised grain is not over 1/64". Light raised grain is not over 1/32". Medium raised grain is not over 1/16". Heavy raised grain is not over 1/8". (d) Loosened grain is a grain separation or loosening between springwood and summerwood without displacement. Very light loosened grain is not over 1/64" separation. Light loosened grain is not over 1/32" separation. Medium loosened grain is not over 1/16" separation. Heavy loosened grain is not over 1/8" separation. Very heavy loosened grain is over 1/8" separation. (e) Skips are areas on a piece that failed to surface clean. Skips are described as follows with equivalent areas being permissible:

Very light skip is not over 1/64" deep.
Light skip is not over 1/32" deep.
Medium skip is not over 1/16" deep.
Heavy skip is not over 1/8" deep.

(f) Hit and miss is a series of skips not over 1/16" deep with surfaced areas between.

(g) Hit or miss means completely surfaced or partly surfaced or entirely rough. Scantness may be 1/16" (h) Mismatch is an unever. fit in worked lumber when adjoining pieces do not meet tightly at all points of contact or when the surfaces of adjoining pieces are not in the same plane.

Slight mismatch is a barely evident trace of mismatch.
Very light mismatch is not over 1/64".
Light mismatch is not over 1/32".
Medium mismatch is not over 1/16".
Heavy mismatch is not over 1/8".

(i) Machine burn is a darkening of the wood due to overheating by machine knives or rolls when pieces are stopped in machine. (j) Machine bite is a depressed cut of the machine knives at the end of the piece. Very light machine bite is not over 1/64" deep. Light machine bite is not over 1/32" deep. Medium machine bite is not over 1/16" deep. Heavy machine bite is not over 1/8" deep. Very heavy machine bite is over 1/8" deep. (k) Machine gouge is a groove cut by the machine below the desired line. Slight machine gouge is less then 1/64" deep. Very light machine gouge is not over 1/64" deep. Light machine gouge is not over 1/32" deep. Medium machine gouge is not over 1/16" deep. Heavy machine gouge is not over 1/8" deep. (1) A machine offset is an abrupt dressing variation in the edge surface which usually occurs near the end of the piece and without reducing the width or without changing the plane of the wide surface. Very light machine offset is a variation not over 1/64". Light machine offset is a variation not over 1/32". Medium machine offset is a variation not over 1/16". Heavy machine offset is a variation not over 1/8". Very heavy machine offset is a variation over 1/8". (m) Chip marks are shallow depressions or indentations on or in the surface of dressed lumber caused by shavings or chips getting embedded in the surface during dressing. Slight chip marks are less than 1/64" deep. Very light chip marks are not over 1/64" deep. Light chip marks are not over 1/32" deep. Medium chip marks are not over 1/16" deep. Heavy chip marks are not over 1/8" deep. (n) Knife marks are the imprints or markings of the machine knives on the surface of dressed lumber. Very slight knife marks are visible only from a favorable angle and are perfectly smooth to the touch. Slight knife marks are readily visible but evidence no unevenness to the touch. (o) Wavy dressing involves more uneven dressing than knife marks. Very slight wavy dressing evidences unevenness that is barely perceptible to the touch. Slight wavy dressing evidences perceptible unevenness that is somewhat less than 1/64" deep. Very light wavy dressing is not over 1/64". Light wavy dressing is not over 1/32". Medium wavy dressing is not over 1/16" deep. Heavy wavy dressing is not over 1/8" deep. Very heavy wavy dressing is over 1/8" deep.

Manufacturing Imperfections, (Classification). (a) Standard "A" Manufacture admits: Very light torn grain; occasional slight chip marks; very slight knife marks. (b) Standard "B" Manufacture admits: Very light torn grain; very light raised grain; very light loosened grain; slight chip marks; average of one slight chip mark per lineal foot but not more than two in any lineal foot; very slight knife marks; very slight mismatch. (c) Standard "C" Manufacture admits: Medium torn grain; light raised grain; light loosened grain; very light machine bite; very light machine gouge; very light machine offset; light chip marks if well-scattered; occasional medium chip marks; very slight knife marks; very slight mismatch. (d) Standard "D" Manufacture admits: Heavy torn grain; medium raised grain; very heavy loosened grain; light machine bite; light machine gouge; light machine offset; medium chip

marks; slight knife marks; very light mismatch. (e) Standard "E" Manufacture admits: Torn grain; raised grain; very heavy loosened grain; medium machine bite; machine gouge; medium machine offset; chip marks; knife marks; light wavy dressing; light mismatch. (f) Standard "F" Manufacture admits: Very heavy torn grain; raised grain; very heavy loosened grain; heavy machine bite; machine gouge; heavy machine offset; chip marks; knife marks; medium wavy dressing; medium mismatch. (g) Standard "G" Manufacture admits: Loosened grain; raised grain; torn grain, machine bite; machine burn; machine gouge; machine offset; chip marks; medium wavy dressing; mismatch.

Measure, Board (B.M.). A unit of measurement of the volume in board feet of logs or lumber.

Medium Grain. Method of grading lumber in which the lumber shall average on one end or the other of each piece not less than 4 annual rings per inch.

Merchandiser. Valuates logs and grades them to assure proper use and utilization.

Merchantable. Trees or stands of a size and quality suitable for marketing and utilization. They may or may not be so located as to be accessible for logging. Also a specific grade of southern yellow pine timbers.

Mill, Portable. A small sawmill that can be readily moved from one place to another. The usual daily capacity ranges from 3 M to 10 M board feet.

Mill, Stationary. A sawmill which has a permanent location as contrasted with a portable sawmill which may be moved at frequent intervals.

Moisture Content. The weight of the water in wood expressed in percentage of the weight of the over-dry wood.

Occasional Pieces. Means not more than 10% of the pieces in a parcel or shipment.

Overrun. The excess of the amount of lumber actually sawed from logs over the estimated volume or log scale, usually expressed in percent of log scale.

Piling. Round timbers to be driven into the ground to support other structures.

Pine. A genus of the coniferous class of plants.

Pineapple Rolls. Individual rollers, pineapple shaped, used to bring all lumber ends to one side.

Pitch. An accumulation of resinous material. (a) Light pitch is the light but evident presence of pitch. (b) Medium pitch is a somewhat more evident presence of pitch than is the light. (c) Heavy pitch is a very evident accumulation of pitch showing by its color and consistency.

Pitch Streak. A well-defined accumulation of pitch in the wood cells in a more or less regular streak. It should not be confused with dark grain. Pitch streaks are described

approximately as follows, with equivalent areas being permissable: (a) Very small pitch streak, 3/8" in width and 15" in length. (b) Small pitch streak, 1/12 the width and 1/6 the length of the piece. (c) Medium pitch streak, 1/6 the width and 1/3 the length of the piece. (d) A large pitch streak is not over 1/4 the width by 1/2 the length of the surface. (e) A very large pitch streak is over 1/4 the width by 1/2 the length of the surface. (f) A pitch seam is a shake or check which contains pitch.

Pith. Pith is the small soft core in the structural center of a log. (a) Very small pith is not over 1/8" wide and occupies on face surface not over 1/4 square inch (1/8" wide by 2" long, or 1/16" by 4"). (b) Small pith occupies not over 3/4 square inch (1/4" by 3", 3/16" by 4" 1/8" by 6", of 1/16" by 12"). (c) Free of pith means that pith on or within the body of the piece is prohibited.

Plan, Management. A written plan for the operation of a forest property using forestry principles. It usually records data and prescribes measures designed to provide optimum use of all forest resources.

Planer, Green. A planing mill in which green lumber is surfaced.

Planer shavings. Fine pieces of wood particles removed from the lumber in the planing process.

Planing. Set of rotating knives which grind the boards to a smooth surface.

Plywood. An assembly product constructed of three or more layers of veneer joined with glue and usually laid with the grain of adjoining plies at right angles to one another. Usually an odd number of plies are used to give balanced construction.

Pocket. A well-defined opening between the rings of annual growth which develops during the growth of the tree. It usually contains pitch or bark. Pockets are described approximately as follows with equivalent areas being permissible: (a) Very small pocket – 1/16" in width and 3" in length, or 1/8" in width and 2" in length. (b) Small pocket – 1/16" in width and 6" in length, or 1/8" in width and 4" in length, or 1/4" in width and 2" in length. (c) Medium pocket – 1/16" in width and 12" in length, or 1/8" in width and 8" in length, or 3/8" in width and 4" in length. (d) A large pocket is not over 4 square inches in area. (e) A very large pocket is over 4 square inches in area.

Pole. A young tree 4 inches d. b. h. or more. The maximum size of poles is usually, though not invariably, taken to be some d. b. h. between 8 and 12 inches. See Sapling.

Poles. Timbers in the round, usually used to support power or telephone poles.

Preservation. Wood preservation is the art of protecting timber and wood products against the action of destructive living organizms, especially fungi, insects, and marine borers. Compare with "protection." It usually refers to the treatment of wood with chemical substances (preservatives) which reduce its susceptibility to deterioration by organisms.

Preservation, Methods. Ordinary methods of wood preservation by impregnating the wood with chemical preservatives are of two orders – nonpressure and pressure – depending

on whether the impregnation process is aided by artificial pressure. (a) Brush, spray, or pouring: Application of one or more coats of coal, tar, creosote or similar oils. (b) Dipping: A superficial open-tank method of treating seasoned wood by immersing it for several minutes in a bath of creosote or other preservative oil or sash preservative oil or sash preservative (chlorinated phenol solution). (c) Hot-and-cold bath: Immersion of seasoned wood for several hours or longer in successive baths of hot and relatively cool preservative—preservative oils or water-soluble salts may be used, but commonly coal tar and mixtures of creosote and other oils are employed. Known also as open-tank process. (d) Open-tank process: See Hot-and-cold-bath. (e) Steeping: An open-tank treatment in which the wood is submerged, usually in a water solution, for a period of days. (f) Pressure treatment: The most widely used pressure treatment is that in which the wood is placed in a closed treating cylinder or retort, usually 6 feet in diameter and 30 to 180 feet long, and impregnated with preservative under considerable pressure.

Preservative. A chemical substance which when suitably applied to wood, makes it resistant to attack by fungi, insects, or marine borers.

Profile. Attachment on a planer that works the sides and/or top and bottom to the proper contours or patterns.

Protection, Forest. The activities connected with the prevention and control of damage to living forests from fire, insects, disease, and other injurious and destructive agencies.

Pulp, Wood. Mechanically ground or chemically digested wood used in the manufacture of paper and allied products. Bleached and purified chemical wood pulp is also widely employed for rayon and other chemical uses.

Pulpwood. Wood cut or prepared primarily for manufacture into wood pulp, for subsequent manufacture into paper, fiberboard, or other products, depending largely on the species cut and the pulping process.

Punky. A soft, weak, often spongy wood condition caused by decay.

Quad. A machine with 4 band saws for cutting logs into lumber.

Quarter-sawed. Wood so sawed that the growth rings form an angle of 45 to 90 degrees with the surface of the piece.

Radial (surface). A longitudinal surface or plane extending wholly or in part from the pith to the bark.

Rate, Growth. With reference to wood, the rate at which the wood substance has been added to the tree at any particular point; usually expressed in terms of number of rings per inch.

Reproduction. The process by which a forest or range is renewed. (a) Artificial: Renewal by direct seeding or planting. Syn. Reforestation. (b) Natural: Renewal by self-sown seeds, sprouts, rhizomes, etc. Syn. Regeneration. Also seedlings or saplings of any origin. Syn. young growth.

Re-saw. A machine used to recover usable lumber from heavy slabs.

Ring, Annual. The growth layer of one year, as viewed on the cross section of a stem, branch, or root.

Ring, False Annual. One of the growth rings of a multiple annual ring.

Ring, Growth. Any growth layer as viewed on the cross section of a stem, branch, or root.

Rot. Wood in a state of decay.

Rot, Dry. A decay of the brown rot type, caused by specialzed fungi able to conduct moisture from an available source and extend their attack to wood previously too dry to decay. Found chiefly on buildings. The term is open to the misinterpretation that wood will rot when dry, which is not true.

Rot, Heart. A decay characteristically confined to the heartwood. It usually originates in the living tree.

Rotation. The period of years required to establish and grow timber crops to a specified condition of maturity.

Roundwood. Products such as poles, piles, posts, and mine timbers.

Salem. Manufacturing company that makes machinery used in the forest products industry.

Sapling. A young tree less than 4 inches d. b. h. The minimum size of saplings is usually, though not invariably, placed at 2 inches d. b. h.

Sapwood. Outer layers of growth between the bark and the heartwood which contain the sap. (a) Bright sapwood shows no stain and is not limited in any grade except as specifically provided. (b) Sapwood restrictions waived means that any restrictions in a rule on the amount of sapwood permitted in pieces graded under that rule are not to apply. (c) Bright sapwood no defect (BSND) means that bright sapwood is permitted in each piece in any amount.

Saw Collar. A device that holds saws on the arbor.

Sawlogs. Logs to be converted into lumber.

Sawmill. A plant at which logs are sawed into salable products. It includes all the machinery and buildings necessary for the operation of the plant.

Sawtimber. Trees that yield logs suitable in size and quality for the production of lumber.

Scale. The estimated sound contents in terms of a given log rule of a log or group of logs; to estimate the sound contents of a log or group of logs. See Log Rule.

Scant. A measurement that does not meet the required volume. Example: scant width.

Scrub. Stunted trees or brush, often in dense stand.

Season. To dry lumber, either in the open or in a dry kiln.

Seasoning. The process of drying (curing) lumber or other forms of wood for better utilization, by natural seasoning (air or underground drying) or artificial seasoning (kiln drying, electrical drying, oil drying, etc.).

Separator. Feeds lumber into drop sorter in an even and organized manner for proper sorting.

Setting Edger. Edger with saws that float on arbor and can be moved to various distances.

Shake. A longwise separation of the wood which usually occurs between or through the rings of annual growth. (a) A light shake is not over 1/32" wide. (b) A medium shake is not over 1/8" wide. (c) A surface shake occurs on only one surface of a piece. (d) A through shake extends from one surface of a piece to the opposite or to an adjoining surface. (e) A pith shake (or heart shake or heart check) extends through the growth rings from or through the pith towards the surface of a piece, and can be distinguished from a season check by the fact that its greatest width is nearest the pith, whereas the greatest width of a season check in a pith-centered piece is farthest from the pith. (f) A ring shake occurs between the growth rings to partially or wholly encircle the pith.

Shed-Pak. Plastic, nylon, fiberglass material developed by Weyco for lumber protection during transportation and storage.

Shifting Edger. See setting edger.

Side Head. Cutting head used on a planer that cuts on the side of the board.

Skid. To pull logs from the stump to the skidway, landing, or mill.

Skidway. Two skids laid parallel at right angles to a road, usually raised above the ground at the end nearest the road. Logs are usually piled upon at skidway, as they are brought from the stump for loading upon sleds, wagons, or cars.

Skip. Areas on the lumber that failed to surface clean.

Slab. The exterior portion of a log removed in sawing timber.

Slash. Branches, bark, tops, chunks, cull logs, uprooted stumps, and broken or uprooted trees left on the ground after logging; also, a large accumulation of debris after wind or fire.

Softwood. One of the botanical group of trees that generally have needle or scalelike leaves—the conifers. Also, the wood produced by such trees regardless of texture or density.

Sorter Tray. Sorted lumber from the sorter falls into the sorter tray before being dumped into the sorter buggies.

Species (of trees). Subordinate to a genus; trees having common characteristics. In common language, a kind or variety.

SPIB. Southern Pine Inspection Bureau is a non-profit organization dedicated to the maintenance of high standards in the Southern Pine lumber industry.

Splits. A separation of the wood due to the tearing apart of the wood cells. (a) A very short split is equal in length to 1/2 the width of the piece. (b) A short split is equal in length to the width of the piece and in no case exceeds 1/6 the length. (c) A medium split is equal in length to twice the width of the piece and in no case exceeds 1/6 the length. A long split is longer than a medium split.

Splitter. Spreads the board from the log while the board is being cut. This prevents the saw from binding. Also in a planer a profile that splits one board into two boards.

Spray paint. Marks the ends of boards for proper grade.

Stacker. Machine designed to place the green lumber in orderly stacks, consisting of a predetermined number of layers in each stack.

Stained wood. (a) Stained Heartwood and Firm Red Heart -- Stained Heartwood or Firm Red Heart is a marked variation from the natural color. It may range from pink to brown. It should not be confused with natural red heart. Natural color is usually uniformly distributed through certain annual rings, whereas stains are usually in irregular patches. In grades where it is permitted, it has no more effect on the intended use of the piece than other characteristics permitted in the grade. (b) Stained Sapwood -- Stained sapwood similarly has no effect on the intended use of the pieces in which it is permitted but affects appearance in varying degrees. (1) Light stained sapwood is so slightly discolored that it does not materially affect natural finishes. (2) Medium stained sapwood has a pronounced difference in coloring which sometimes affects its usefulness for natural finishes but not for paint finishes. (3) Heavy stained sapwood has so pronounced a difference in color that the grain may be obscured, but the lumber containing it is acceptable for paint finishes. (c) Discoloration through exposure to the elements is admitted in all grades of framing and sheathing lumber.

Stamp. Stamps are given to lumber graders by the SPIB who have met SPIB standards. Stamps specify what grade of lumber that board is.

Scale Stick. A graduated stick for measuring the diameters and contents of logs; both measures are stamped on the stick.

Sticker. Sticks placed between layers. Stickers should be dry, straight and of uniform thickness and width.

Stop and Kicker. A log stop retains logs until they are needed on the carriage. The log kicker pushes the logs from the jack ladder onto the log deck or into conveyor.

Strapper. Places metal bands around the stacks of lumber for faster, safer handling.

Stress Grades. Lumber grades having assigned working stress and modulus of elasticity values in accordance with accepted basic principles of strength grading, and the provisions of sections 5.3.1 and 5.3.2 of Voluntary Product Standard 20 – 70.

Stumpage. The value of timber as it stands uncut in the woods; in a general sense, the standing timber itself.

Swage. Saws flared at the cutting edge so they are wider than the thickness of the saw blade. Swage is the mechanical device that produces this flare.

Take Down Hoist. Mechanical device that unstacks a stack of lumber one layer at a time.

Tally. The count of trees, logs, or other products; to count trees, logs or other products; to record products, distances, etc., as measured.

Tally, Lumber. A record of lumber giving the number of boards or pieces by size, grade, and species. Syn. Mill tally.

Tallyman. One who makes a record of units being counted or measured.

Tape, Diameter. A tape based on relationship of circumference to diameter, for measuring the diameters of trees directly.

Taper. The gradual diminution of diameter in a stem of a tree or a log from the base to the top. Syn. Rise.

Technology, Wood. The study of wood in all its aspects; the science of wood, including its anatomy, chemistry, properties, and treatment.

Texture. In wood anatomy, the sizes, distribution, and proportional volumes of the cellular elements of which wood is composed; often used interchangeably with grain.

Thinning. Cutting in an immature stand to increase its rate of growth, to foster quality growth, to improve composition, to promote sanitation, to aid in litter decomposition, to obtain greater total yield, and so recover and use material that would be lost otherwise.

Timber. A term loosely applied to forest stands or their products; often applied to wood in forms suitable for heavy construction, as for houses, ships, and bridges.

Timber, Merchantable. A tree or stand of trees which may be disposed of at a profit through conversion to salable products.

Tire. An area on each edge which has not been stretched and therefore is shorter than the rest of the saw, thus making it tighter.

Tooth Spacing. Space between two teeth.

Top. Top of the saw tooth.

Top Arbor Edger. Saw arbor rotates above the wood being cut.

Tophead. Cutting head used on a planer that cuts on top of the board and ahead of the side head.

Transfer. The n of lumber transportation where lumber is moved on chains in a direction perp dicular to its length axis.

Tree. A woody plant having one well-defined stem and a more or less definitely formed crown, usually attaining a height of at least 8 feet.

Trim. (a) Trimming of lumber is the act of cross cutting a piece to a given length. (b) Double end trimmed (DET) lumber is trimmed reasonably square by a saw on both ends. (c) Precision end trimmed (PET) lumber is trimmed square and smooth on both ends to uniform lengths with a manufacturing tolerance of 1/16" over or under in length in 20% of the pieces. (d) Square end trimmed lumber is trimmed square permitting slight manufacturing tolerance of 1/64" for each nominal 2" of thickness or width.

Trimmer. Saw which cuts boards to the proper length.

Truck Scale. Scaling (determining) the volume of timber contained on a log truck by weighing.

Twist. One corner of the piece of lumber twists out of the plane of the other three.

Unit. A long cord containing 160 cubic feet. Sticks are also usually cut 5 feet long as compared to 4-foot sticks in a standard cord.

Unscrambler. A v-notched area in a conveyor designed to straighten the scrambled lumber before the lumber is fed into a machine.

Value Added. The difference between the value of goods produced by an enterprise and the cost of goods purchased by it.

Veneer. A thin sheet of wood cut on a veneer machine. There are three kinds of veneers: sawed, sliced, and rotary cut.

Veneer Logs. The highest quality that can be cut from a tree.

Vibrating Conveyor. A conveyor that moves material by its vibrating action rather than on belts or chains.

Volume, Merchantable. The amount of wood in a single tree or stand considered salable.

Wane. Bark or lack of wood from any cause, except eased edges, on the edge or corner of a piece of lumber. A wane dip extends across a surface to occupy full surface for a part of length. (a) A very short wane dip occupies full surface for not over 4" of length. (b) A short wane dip occupies full surface for not over 16" of length.

Warp. Any deviation from a true or plane surface, including bow, crook, cup and twist or any combination thereof. Warp restrictions are based on the average form of warp as it occurs normally, and any variation from this average form, such as short kinks, shall be appraised according to its equivalent effect. Pieces containing two or more forms shall be appraised according to the combined effect in determining the amount permissible. In these rules warp is classified as very light, light, medium and heavy, and applied to each width and length as set forth in the various grades in accordance with the following provisions. (a) Bow is a deviation flatwise from a straight line drawn from end to end of a piece. It is measured at the point of greatest distance from the straight line. The amount permitted according to the grade is as follows: If under 2" thick, three times as much crook as permitted for 2" faces. If 2" thick and under 3", twice as much crook as permitted for 2" faces. If 3" thick and over, the same as the amount of crook permitted for that thickness. (b) Crook is a deviation edgewise from a straight line drawn from end to end of a piece. It is measured at the point of greatest distance from the straight line. (c) Cup is a deviation in the face of a piece from a straight line drawn from edge to edge of a piece. It is measured at the point of greatest distance from the straight line. (d) Twist is a deviation flatwise, or a combination of flatwise and edgewise, in the form of a curl or spiral, and the amount is the distance an edge of a piece at one end is raised above a flat surface against which both edges at the opposite end are resting snugly.

Wood. The lignified water-conducting, strengthening, and storage tissue of branches, stems, and roots. Syn. Xylem.

Wood, Rough. Unpeeled cordwood.

Woods 409. Planer made by S. A. Woods Company.

Wrapper. Wraps the stacks of lumber with a protective covering called Shed-Pak.

Yard. A place where logs, pulpwood, or other timbers are collected; to collect logs in a yard, landing, or skidway.

Yield, Sustained. As applied to a policy, method, or plan of forest management, implies continuous production with the aim of achieving, at the earliest practicable time, an approximate balance between net growth and harvest, either by annual or somewhat longer periods.